Supplementary Online Content

Nahin RL, Feinberg T, Kapos FP, Terman GW. Estimated rates of incident and persistent chronic pain among US adults, 2019-2020. *JAMA Netw Open.* 2023;6(5):e2313563. doi:10.1001/jamanetworkopen.2023.13563

eTable 1. Pain Status in 2020 by Pain Status in 2019 Among the National Health Interview Survey 2019-2020 Longitudinal Cohort

eTable 2. Data Across Selected Chronic Pain Incidence Studies

eFigure. Study Sample Flowchart

eReferences

This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Pain Status in 2020 by Pain Status in 2019 Among the National Health Interview Survey 2019-2020 Longitudinal Cohort

| 2019 Pain Status | 2020 Pain Status | Raw Frequency | Weighted Frequency (1000's) | Weighted Percent | Lower 95% Confidence Limit | Upper 95% Confidence Limit |
|----------------------------------|---|------------------|-----------------------------------|---------------------|----------------------------------|----------------------------------|
| No pain in the last 3 months | No pain in the last 3 months | 2293 | 63,037 | 62.3 | 60.0 | 64.6 |
| | Non-chronic pain ^a Chronic pain ^b | 1168 262 | 30,277 6,352 | 29.9 6.3 | 27.8 5.3 | 32.0 7.3 |
| | High-impact chronic pain ^c Unknown pain | 63 | 1,413 | 1.4 | 0.9 | 1.9 |
| Non-chronic pain ^a | status Total ^d | 53 3776 | 1,478 101,143 | 1.5 100.0 | 0.9 | 2.0 |
| puni | No pain in the last 3 months | 1121 | 29,041 | 29.8 | 27.7 | 31.9 |
| | Non-chronic pain ^a | 2335 | 52,695 | 54.0 | 51.9 | 56.2 |
| | Chronic pain ^b | 676 | 1,451 | 14.9 | 13.5 | 16.3 |
| | High-impact chronic pain ^c | 157 | 3,762 | 3.9 | 3.0 | 4.7 |
| | Unknown pain status Total ^d | 53 4185 | 1,220 97,507 | 1.3 100.0 | 0.8 | 1.7 |

^{© 2023} Nahin RL et al. JAMA Network Open.

| 2019 Pain Status | 2020 Pain Status | Raw Frequency | Weighted Frequency (1000's) | Weighted Percent | Lower 95% Confidence Limit | Upper 95% Confidence Limit |
|---------------------------|---------------------------------------|------------------|-----------------------------------|---------------------|----------------------------------|----------------------------------|
| Chronic pain ^b | | | | | | |
| | No pain in the last 3 months | 210 | 5,405 | 10.4 | 8.4 | 12.3 |
| | Non-chronic pain ^a | 661 | 13,876 | 26.6 | 24.2 | 29.1 |
| | Chronic painb | 1,541 | 31,962 | 61.4 | 58.6 | 64.1 |
| | High-impact chronic pain ^c | 676 | 13,957 | 26.8 | 24.2 | 29.4 |
| | Unknown pain status | 34 | 837 | 1.6 | 0.7 | 2.5 |
| Total | Totald | 2,446 | 52,080 | 100.0 | | |
| iotai | No pain in the last 3 months | 3,625 | 97,586 | 38.9 | 37.3 | 40.4 |
| | Non-chronic pain ^a | 4,167 | 96,870 | 38.6 | 37.3 | 39.9 |
| | Chronic pain ^b | 2,482 | 52,918 | 21.1 | 20.0 | 22.2 |
| | High-impact chronic pain ^c | 896 | 19,133 | 7.6 | 6.9 | 8.3 |
| | Unknown pain status | 141 | 3,543 | 1.4 | 1.1 | 1.7 |
| | Totald | 10,415 | 250,917 | 100.0 | | |

Footnotes:

a: Pain 'some days' in the last 3 months
b: Pain 'most days' or 'every day' in the last 3 months
c: Chronic pain that limited life or work activities 'most days' or every day' in the last 3 months
d: Denominator based on the sum of No pain, Non-chronic pain, Chronic pain and Unknown pain status. High-impact chronic pain is a subgroup of Chronic pain and does not add independently to the denominator

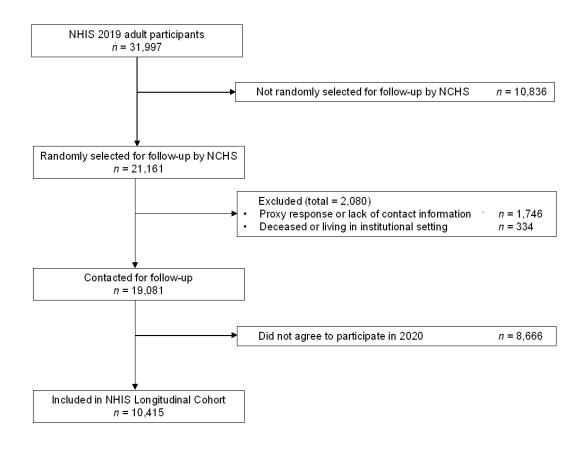
eTable 2. Data Across Selected Chronic Pain Incidence Studies

| Lead Author Country | Eriksen et al ¹ Denmark | Landmark et al ² Norway | Larsson et al ³ Sweden | Elliott et al ⁴ United Kingdom | Nahin et al ⁵ United States |
|---|-------------------------------------|-------------------------------------|-------------------------------------|--|--|
| Construction of Cohort | National random sample of those 16+ | Regional random sample of those 20+ | National random sample of those 65+ | Regional random sample of those 25+ | National random sample of those 18+ |
| Sample Size at follow-up | 2,649 | 3,405 | 843 | 1,608 | 10,415 1.3 |
| Years of follow-up | 6 | 1 | 1 | 4 | (average) |
| | | Annu | alized proportions | | |
| No pain ===> No pain Cumulative Incident chronic pain | 89.7%ª | 84.2% | Unknown | 66.7% | 62.3% |
| No pain ===> Chronic pain Persistent chronic pain Chronic pain ===> Chronic | 1.8%ª | 4.8% | 5.4% | 8.3% | 6.3% |
| pain | 47.9% ^a | 70.8% | 93.5% | 78.5% | 61.4% |
| Recovery from chronic pain Chronic pain ===> No pain | 8.7%ª | 8.4% | Unknown | 5.4% | 10.4% |

Footnote:

a = hand calculated based on data presented in Table 2 of Eriksen et al¹

eFigure. Study Sample Flowchart



NHIS: National Health Interview Survey NCHS: National Center for Health Statistics

eReferences

- Eriksen J, Ekholm O, Sjøgren P, Rasmussen NK. Development of and recovery from long-term pain. A 6-year follow-up study of a cross-section of the adult Danish population. Pain. 2004 Mar;108(1-2):154-62.
- 2. Landmark T, Dale O, Romundstad P, Woodhouse A, Kaasa S, Borchgrevink PC. Development and course of chronic pain over 4 years in the general population: The HUNT pain study. Eur J Pain. 2018 Oct;22(9):1606-1616.
- 3. Larsson C, Hansson EE, Sundquist K, Jakobsson U. Chronic pain in older adults: prevalence, incidence, and risk factors. Scand J Rheumatol. 2017 Jul;46(4):317-325.
- 4. Elliott AM, Smith BH, Hannaford PC, Smith WC, Chambers WA. The course of chronic pain in the community: results of a 4-year follow-up study. Pain. 2002 99(1-2):299-307.
- 5. Nahin RL, Feinberg T, Kapos FP, Terman GW. Estimated rates of Incident and Persistent Chronic Pain Rates in US adults: 2019-2020; JAMA Open Network, 2023.